SOLNTSEVA, N.V., inzh.; TREGUBOVA, M.M., inzh.

Chemical and technical control and production accounting. Trudy TSNIIKPP no.3:178-187 '59. (MIRA 13:9)
(Starch industry)

VEKSLER, Boris Aleksandrovich, kand.tekhn.nauk; MILYUTIN, Aleksey Arsen'yevich, kand.tekhn.nauk; MARKER, Vanda Edmundovna, inzh.; SIDOROVA, Yelena Konstantinovna, kand.tekhn.nauk; KRAVCHENKO, S.F., inzh., retsenzent; SOLNTSEVA, N.V., inzh., spetsred.; PRITYKINA, L.A., red.; KISINA, Ye.I., tekhn.red.

[Control in industrial chemistry and accounting in potato starch and sirup production] Tekhnokhimicheskii kontrol' i uchet kartofelekrakhmalo-patochnogo proizvodstva. Moskva, Pishchepromizdat, 1960. 245 p. (MIRA 13:11)
(Starch industry) (Production control)

BAKANOV, Nikolay Alekseyevich; BURMAN, Mark Yefimovich; SOLNTSEVA, Nina Vasil'yevna; BYCHKOV, B.K., inzh., retsenzent; USPENSKIY, I.Ye., inzh., retsenzent; SHAMBORANT, G.G., spets. red.; KRUGLOVA, G.I., red.; SOKOLOVA, I.A., tekhn. red.

[Handbook on starch and molasses production]Spravochnik po krakhmalo-patochnomu proizvodstvu. 2 izd. perer. i dop. Pod red. M.E.Burmana. Moskva, Pishchepromizdat, 1962. 478 p. (MIRA 15:11)

(Starch) (Molasses)

SOLNTSEVA, N.V.

Utilization of corn extract. Sakh. prom. 37 no.4:59-61 Ap '63.
(MIRA 16:7)

1. Gosudarstvennyy komitet Soveta Ministrov RSFSR po koordinatsii nauchno-issledovatel'skikh rabot.
(Starch industry—By-products)

SVETLOV, B.Ya., SOLNTSEVA, R.N.

Chemical stability of aluminum in the composition of industrial explosives. Vzryv. delo no.52/9:67-80 '63. (MIRA 17:12)

1. Mezhduvedomstvennaya komissiya po vzryvnomu delu.

SVETLOV, B.Ya., kand.tekhn.nauk; SOLNTSEVA, R.N., inzh.; TITUSHINA, M.I., inzh.

Granular explosives for charging flooded boreholes in opencut workings. Vzryv.delo no.44/1:40-57 '60. (MIRA 13:7)
(Explosives)
(Strip mining)

15(7)
AUTHORS: Kozlov, V. V., Solntseva, R. R. SOV/64-58-7-8/18

TITLE: On the Hygroscopicity of Acid Azo Dyes
(O gigroskopichnosti kislotnykh azokrasiteley)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 7, pp 416-420 (USSR)

ABSTRACT: The dependence of the moisture absorption of dyes as well as their salts on the relative air-moisture in the case of constant temperature were investigated, and the function of this moisture absorption versus time was determined. The maximum moisture content observed during the experiment was regarded as the equilibrium moisture of the dye. The determination of the hygroscopicity was carried out according to the static (or exsiccator) method (Ref 2). The quantity of the equilibrium moisture is a function of the relative air-moisture and the nature of the dye. The sorption isothermal lines have an S-shape similar to those of capillary porous bodies (Ref 3). The moisture of the dye increases at constant temperature with the increase of the relative air-humidity. This increase is especially high at an air-humidity of more than 70%. At the same relative air-humidity (e. g. 70%) the dyes acid red 2 C (15.7%),

Card 1/2

acid blood-red (12.9%), acid light red (11.3%) have the highest equilibrium moisture, whereas acid orange (8.6%) has the lowest value. A comparison demonstrates that the order of hygroscopicity of the dyes is almost the same as the order of the solubility. However, no theoretical (Ref 5) dependence on the structure of the dye could be found. The experimental results on the moisture absorption of sodium, potassium, ammonium and calcium salts of the dyes show that (as in the dyes themselves) the moisture for the most part is absorbed within the first days. Fillers increase the hygroscopicity of the dyes. There are 4 figures, 4 tables, and 6 Soviet references.

SOLNTSEVA, R. R.; KOZLOV, V. V.

Insoluble azo dyes from diazotated aminoanthraquinones in capron dyeing. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:800-803 '62. (MIRA 16:1)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova, kafedra organicheskoy khimii.

(Azo dyes) (Dyes and dyeing—Nylon)

SOLNTSEVA, R.R.; KOZLOV, V.V., prof., doktor khim. nauk, red.; KOROLEVA, A.P., red.

[Basic information on electronic concepts in organic chemistry; a manual for independent work by students] Nachal'nye svedeniia ob elektronnykh predstavleniiakh v organicheskoi khimii; rukovodstvo dlia studentov pri samostoiatel'nom izuchenii. Pod red. V.V.Kozlova. Moskva, Mosk. in-t nar. khoz. im. G.V.Plekhanova, 1965. 56 p. (MIRA 19:1)

[illegible], [illegible] —

"The Construction of Certain Many-Valued Relations Among the Points of Two Planes." Cand Phys-Math Sci, Moscow Oblast Pedagogic Inst, 4 Nov 54. (VM, 21 Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions. (12)

SO: Sum. No. 481, 5 May 55

SOLNTSEVA, T. V

Solnceva, T. V. Some remarks on the article of D. Z. Gordevskiĭ "Multidimensional analogues of the hyperboloid". Uspehi Mat. Nauk (N.S.) 11 (1956), no. 3(69), 175–176. (Russian)

It is pointed out that most results in the article mentioned in the title [Uspehi Mat. Nauk (N.S.) 10 (1955), no. 3(65), 129–133; MR 17, 183] are false or senseless, and that adequate definitions of higher dimensional hyperboloids and their properties are already found in the classical works of Bertini and C. Segre. *H. Busemann*

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SOLNTSEVA, T.V.

Application of (3.3)-valued and (6.6)-valued correspondences to the generalization of Burmester's theorems. Uch. zap. MOPI 39 no.3: 103-114 '56. (MLRA 10:4)

(Geometry, Modern)

SOLNTSEVA, T.V.

New synthetic theory of A.K. Vlasov's cubic polar system. Uch. zap. MOPI 39 no.3:115-125 '56. (MLRA 10:4)
(Geometry, Modern)

SOLNTSEVA, T.V.

Establishment of a quadratic correspondence with the help of a net of conic sections. Uch. zap. MGPI 96:269-272 '60.
(MIRA 16:7)

(Geometry, Projective)
(Conic sections)

ARONZON, I.M.; SOLNTSEVA, T.V., red.

[Graphicoanalytical design of plane mechanisms; manual for students of the Department of Technology] Grafoanaliticheskii raschet ploskogo mekhanizma; uchebnoe posobie dlia studentov tekhnologicheskogo fakul'teta. Moskva, Mosk. in-t nar. khoz. im. G.V.Plekhanova, 1962. 34 p. (MIRA 19:1)

1. Moscow. Institut narodnogo khozyaystva. Kafedra vysshey matematiki i teoreticheskoy mekhaniki.

NIZHARADZE, S.R. (Batumi); SOLNTSEVA, T.V. (Moskva)

Construction of nomograms on universal curves of the third order. Nom. sbor. no.2:145-152 '64. (MIRA 18:3)

GLAGOLEV, Aleksandr Aleksandrovich; SOLNTSEVA, Tat'yana Vladimirovna; TAL'SKIY, D.A., red.

[Course in higher mathematics] Kurs vysshei matematiki. Moskva, Vysshaia shkola, 1965. 591 p. (MIRA 18:11)

SOLNTSEVA, T.V. (Moskva)

Constructing a nomogram for an equation of the type xyzt = uv with the aid of Pascal's theorem. Nom. sbor. no.3:109-111 '65.

Three-dimensional nomogram for an equation of the type xyz = t. (MIRA 18:10)
Ibid.:112-115

SOLNTSEVA, T.Ye., Cand Tech Sci -- (diss) "Analysis of sharpening methods and their effect on the cutting properties of spiral drills." Mos, 1958, 16 pp with sketches (Min of Higher Education USSR. Mos Order of Lenin and Order of Labor Red Banner Higher Tech School im Bauman) 150 copies (KL, 50-58, 126)

SOLNTSEVA, T.Ye., assistent

Grinding spiral drills along two planes. Izv. vys. ucheb. zav.; mashinostr. no.9:152-161 '58. (MIRA 12:10)

1.Moskovskoye vysshoye tekhnicheskoye uchilishche im. Baumana.
(Grinding and polishing) (Twist drills)

SOV/122-59-6-16/27

AUTHOR: Solntseva, T.Ye., Engineer

TITLE: Analysis of Modern Twist Drill Sharpening Methods

PERIODICAL: Vestnik mashinostroyeniya, 1959, Nr 6, pp 55-63 (USSR)

ABSTRACT: Previous analysis is stated to have been over-simplified, to have been concerned mainly with the front-rake angle and the slope of the transverse web edge without sufficient attention to the back-rake angle of the transverse web edge and to have considered only sharpening methods along curved surfaces. An attempt is made to eliminate these shortcomings of analysis. Several methods of ahrpening are separately analysed. In the Washburn method, the drill face surfaces are parts of a cone, whose axis forms an angle to the drill axis and is offset at a distance from the drill axis. An exact formula (Eq 1) is given for the transverse web edge slope. Comparison of the exact formula and approximations (Table 1) shows the limitations of the latter. The cutting-lip edges are theoretically curvilinear, although almost straight, and if assumed exactly straight, the front rake in a cylindrical cross-section can be found from a formula (Eq 4). An exact

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formula is mentioned though not stated and used in Table 2 for comparison with the approximate formula. This sharpening method permits a choice of the cutting-lip front rake and transverse web edge slope by the setting-up dimensions in sharpening. The shape of the transverse web edge is unfavourable to the centering properties of the drill and therefore to its endurance. The back-rake angle of the transverse web edge is computed and shown graphically (Figure 4) with the transverse web edge slope as a parameter. The smaller the slope angle, the lower the absolute value of the negative back-rake angle. This reduces the axial force but below a certain value of the slope angle, the length of the transverse web edge becomes excessive. In the Weisker sharpening method, the drill face surfaces are parts of conical surfaces where the axis of the cone is perpendicular to and offset from the axis of the drill and the cone apex is at a given distance from the drill axis, which must exceed a certain value determined by the drill diameter, the slope of the

main cutting-lip edge and the lateral offset between the sharpening cone axis and the drill axis. Again, the slope of the transverse web edge, the front rake of the main cutting-lip edge and the back rake of the transverse web edge are computed and the criteria mentioned earlier are applied. It is stated that no advantages can be claimed, compared with the Washburn method. In the Blau method the drill faces are parts of cylindrical surfaces. The axis of the cylinder is inclined to the drill axis by the slope angle of the main cutting-lip edges and is offset laterally. The slope of the transverse web edge, the front rake of the main cutting-lip edge and the back rake of the transverse web edge are computed but no advantages compared with the Washburn method are apparent. Sharpening of the drill faces along helical surfaces either against a conical grinding wheel face (Sukhov) or a flat face (Oliver) produces conditions somewhat worse for the centering properties and somewhat better from the point of view of a smaller negative rake angle of the transverse-

web edge. Several methods of sharpening along flat planes are considered. In one method, the grinding plane is set up by turning about the transverse-web edge; in another method, by turning about the main cutting-lip edge. The front rake angles of the main cutting-lip edge increase towards the centre of the drill, as shown in graphs in Figure 3. The centering properties of the drill are unsatisfactory owing to the fact that the transverse-web edge is a straight line. The combination of optimum front rake angles of the main cutting-lip edge, lack of interference between the drill faces and the bottom of the drilled hole and good centering properties can be achieved by grinding along two flats (Figure 9). The second flat removes the interfering part of the face. The transverse-web edge becomes a broken line and so has better centering properties. The back rake of the transverse-web edge can be constant along the edge and can be reduced to 42°, which should reduce the axial force. Force and endurance measurements with 18% tungsten high-speed steel 20 mm dia drills used to drill 0.45% C steel with a coolant are said to have confirmed the conclusions of the

Analysis of Modern Twist Drill Sharpening Methods

theoretical analysis. Drills with conical faces are based on a slope angle of the transverse-web edge between 35 and 40°. The axial force was reduced by 22%, compared with that at a transverse-web edge slope of 55°. Drills sharpened along two flats have shown on test which optimum values for the angle of the second flat against the first are recommended. These angles are different according to the azimuth position of the intersection between the two flats in relation to the main cutting-lip edges. With the optimum angles, the two-flats method appears to combine the best drill properties found in any method of sharpening. Especially in high-speed cutting, only drills sharpened with flats or helical surfaces have given satisfactory tool lives. It is concluded that the most efficient sharpening method from the point of view of simple execution, precision and tool life is the two-flats method and the development of drill grinders suitable for this method is urged.

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COLOVLEV, Sergey Georgiyevich, kand. tekhn. nauk; LEVITSKIY, V.S., kand. tekhn. nauk, retsenzent; SOINTSEVA, T.Ye., kand. tekhn. nauk, red.; MODEL', B.I., tekhn. red.

[Development of the elements of equipment and piping; manual on analytic methods for the determination of dimensions] Razvertki elementov apparatury i truboprovodov; spravochnoe posobie po analiticheskim metodam opredeleniia razmerov. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1961. 211 p. (MIRA 15:2)

(Laying out (Machine-shop practice))—Graphic methods)

BATALOV, Nikolay Mikhaylovich, inzh.; MALKIN, David Mendeleyevich, inzh.; GORDON, V.O., prof., retsenzent; SOLNTSEVA, T.Ye., kand. tekhn. nauk, red.; SOKOLOVA, T.F., tekhn. red.

[Technical fundamentals of mechanical drawing; execution of drawings and other technical documents] Tekhnicheskie osnovy mashinostroitel'nogo chercheniia; vypolnenie chertezhei i drugikh tekhnicheskikh dokumentov. Moskva, Mashgiz, 1962. 500 p. (MIRA 15:6)

(Mechanical drawing)

IVANOV, Yu.B.; SOLNTSEVA, T.Ye.; VASIL'YEVA, N.G., inzh., red.

[Atlas of assembly drawings for details] Atlas sborochnykh chertezhei dlia detalirovok. Moskva, Mashgiz, 1963. 72 p.
(MIRA 17:5)

SATALKIN, A.V., doktor tekhn.nauk, prof.; SOLNTSEVA, V.A., kand.khim. nauk, dotsent

Waterproofness of harsh concrete. Sbor. trud. LIIZHT no.181: 3-17 '62. (MIRA 16:9)

SATALKIN, A.V., doktor tekhn. nauk, prof.; SOLNTSEVA, V.A., kand. tekhn. nauk, dotsent

Additives for sprayed concrete. Sbor. trud. LIIZHT no.200:40-60 '62. (MIRA 16:7)

(Concrete)

SATALKIN, A.V., doktor tekhn. nauk, prof.; SOLNTSEVA, V.A., kand. khim. nauk, dotsent

Increasing the waterproofness of stiff concrete by introducing additives. Sbor. trud. LIIZHT no.200:61-77 '62. (MIRA 16:7)

(Concrete—Testing)

SATALKIN, A.V.; SOLNTSEVA, V.A.

Structure formation in a cement paste and in solutions with additives. Zhur. prikl. khim. 36 no.8:1641-1646 Ag '63. (MIRA 16:11)

L 13884-66 EWT(m)/EWP(j) WW/RM

ACC NR: AP6005406 (A) SOURCE CODE: UR/0101/66/000/001/0014/0015

AUTHOR: Satalkin, A. V. (Doctor of technical sciences); Solntseva, V. A. (Candidate of chemical sciences); Popova, O. S. (Engineer)

ORG: Leningrad Institute of Rail Transport Engineers (Leningradskiy institut inzhenerov zheleznodorozhnogo transporta)

TITLE: Cement with increased extensibility

SOURCE: Tsement, no. 1, 1966, 14-15

TOPIC TAGS: concrete, cement, reinforced concrete, synthetic resin additive, mechanical property

ABSTRACT: A study has been made of the effect of synthetic resin additives on mechanical characteristics of portland cement and concrete to produce concrete of increased extensibility, suitable for road pavement, airfield runways surfacing etc. Comparative mechanical tests of fine grained concretes with new water-soluble additives, such as TEG-17 and DEG-1 epoxy resins and 89 resin, and with previously used additives, indicated a substantial increase in tensile and compressive strength and water resistance, and a 4—5-fold increase in extensibility of the portland cement with new water-soluble polymer additives. The highest tensile and compressive strength was determined in concretes with 2% additions of 89 and TEG-17 resins in aqueous medium. The high early strength increased further with increasing time of set under all setting

Card 1/2 UDC: 666.958

L 13004-66

ACC NR: AP6005406

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conditions. The highest specific extensibility was also achieved with 89 resin. Deformability on compression and creep limit did not increase by addition of the water-soluble resins. The combination of increased extensibility with an increase in tensile strength of concrete may lead to an increase in crack resistance of concrete, i.e., in reliability and durability of concrete and reinforced concrete structures. Orig. art. has: 4 figures and 2 tables. 44,55 [JK]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ ATD PRESS: 4193

SB

Card 2/2

L 05868-67 EWT(m)

ACC NR: AP6029973 SOURCE CODE: UR/0413/66/000/015/0166/0166

INVENTOR: Satalkin, A. V.; Popova, O. S.; Sokolovskiy, V. T.; Solntseva, V. A. 29 B

ORG: none

TITLE: Method of preparing water-resistant concrete or solutions. Class 80, No. 184691 [announced by Leningrad Order of Lenin Institute of Railroad-Transportation Engineers im. Academician V. N. Obraztsov (Leningradskiy instituta inzhenerov zheleznodorozhnogo transporta)]

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 166

TOPIC TAGS: concrete, cement, material deformation, wear resistance

ABSTRACT: An Author Certificate has been issued for a method of preparing water-resistant concrete or solutions by mixing together cement, fillers, and water containing polymeric additives. Better water resistance and product deformation result when 1.5--2.5% by weight of polymeric additives, consisting of water-soluble epoxy resins (diethylene glycol or triethylene glycol) and a polyethylenepolyamine hardener, are introduced into the cement. [SA]

SUB CODE: 11, 07/ SUBM CODE: 25May64

KH

Card 1/1 UDC: 666.972.522:666.972.16

BERKOVICH, T., kandidat tekhnicheskikh nauk; RABINOV, I., kandidat tekhnicheskikh nauk; SOLNTSEVA, V., kandidat tekhnicheskikh nauk; SMIRNOV, N., doktor geologo-meneral'nyy nauk; SHNEYDER, V., kandidat ekonomicheskikh nauk.

Making roof slate and asbestos pipes using a sand cement base. Stroi.mat., izdel.i konstr. 1 no.11:4-6 N '55. (MLRA 9:5)
(Roofing) (Asbestos cement)

SOLNT[illegible]VA, V.L.

I-9

USSR/ Chemical Technology - Chemical Products and Their Application. Silicates. Glass. Ceramics. Binders.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12697

Author : Berkovich T.M., Rabinov I.L., Solntseva V.L., Smirnov N.N.
Inst : All-Union Scientific Research Institute of Asbestos, Mica and Asbestocement Articles.
Title : Physicochemical Foundations of the Production of Slate from Sandy Cement with Steaming in Autoclaves.

Orig Pub : Tr. Vses. n.-i. in-ta asbesta, slyudy i asbestotsement. izdeliy, 1956, No 4, 3-18

Abstract : Utilized were sandy cements produced by milling of Portland cement clinkers of different mineralogical composition with quartz sand in the proportion of 1:1. The cement was milled with 3.6% of gypsum dihydrate until a 7.5-8.5% residue was obtained on a No.0085 screen. The asbestos used consisted of 50% M-50-60 and 50% P-6-30. The specimens were steamed at a pressure of 2-15 atm

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12697

has an average value of 1.2. When the amount of reacted sand is such that a maximum strength of asbestocement is attained, the calculated depth of silicatization of the grains of sand is, on the average, of 0.3 μ .

IVANOV, F.M., kand.tekhn.nauk; SOLNTSEVA, V.L., kand.tekhn.nauk.

Structure and properties of cement mortar. Bet. i zhel.-bet. 8 no.5:233-237 My '62. (MIRA 15:6)
(Cement--Testing)

SOLNTSEVA, Ye.L.

Distribution of springtails in the different forests types of Moscow Province. Zool. zhur. 41 no.5:683-693 My '62.
(MIRA 15:6)

1. Chair of Zoology, V.I.Lenin State Pedagogical Institute of Moscow.
(Moscow Province—Springtail)

SOLNTSEVA, Ye.L.

Collembola of the Moscow region. Uch. zap. MGPI no.227:307-382 '64. (MIRA 18:11)

SOLNTSEVA, Ye.M., kand.ekon.nauk

The innovation movement in coal mining is an important factor for a potential increase in labor productivity. Izv.vys.ucheb. zav.; gor.zhur. no.3:70-74 '58. (MIRA 12:8)

1. Sverdlovskiy gornyy institut.
(Coal mines and mining--Labor productivity

SOLNTSEVA, Ye.M., kand.ekonomicheskikh nauk

Most important potentialities for the growth of labor productivity in open-cut coal mines. Izv.vys.uchab.zav.; gor. zhur. no.2:62-67 '59. (MIRA 13:4)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendovana kafedroy politicheskoy ekonomii.
(Coal mines and mining--Labor productivity)

STADUKHIN, D.G., kand.ekonomicheskikh, nauk; SOLNTSEVA, Ye.M., kand. ekonomicheskikh nauk

Interindustrial potentialities as an economic category. Izv.vys. ucheb.zav.; gor.zhur. no.1:63-68 '60. (MIRA 13:6)

1. Sverdlovskiy gornyy institut imeni V.V. Vakhrusheva. Rekomendovana kafedroy politicheskoy ekonomii.
(Mining engineering)

SOLNTSEVA, Ye.M. (Leningrad)

Influence of a shortened bed regimen on the healing of perineal sutures in parturients. Fel'd. i akush. 26 no.12:18-20 D '61. (MIRA 14:12)

(PERENIUM--SURGERY) (LABOR (OBSTETRICS))

SOLNTSEVA, Ye.M.

Microflora in the perineal wounds of puerperae in dehiscence of the sutures. Antibiotiki 7 no.5:473-475 My '62. (MIRA 15:4)

1. 2-ye akusherskoye otdeleniye (zav. S.G.Khaskin) i bakteriologicheskaya laboratoriya (zav. A.P.Yegorova) Instituta akusherstva i ginekologii AMN SSSR.

(PERINEUM--RUPTURE) (WOUNDS--MICROBIOLOGY)
(ANTIBIOTICS)

SOLNTSEVA, Ye.M.

Secondary sutures in dehiscence of a perineal wound in puerperae. Sov. med. 25 no.1:85-88 Ja '62. (MIRA 15:4)

1. Iz 2-go akusherskogo otdeleniya (zav. - prof. S.G.Khaskin) Instituta akushertstva i ginekologii AMN SSSR (dir. - prof. M.A.Petrov-Maslakov).
(LABOR, COMPLICATED) (PERINEUM--SURGERY)

SOLNTSEVA, Ye.M.

Use of streptomycin for the prevention of dehiscence of perinal sutures in puerperas. Antibiotiki 8 no.2:169-172 F'63. (MIRA 16:7)

1. 2-ye akusherskoye otdeleniye (zav. - prof. S.G.Khaskin) i bakteriologicheskaya laboratoriya (zav. A.P.Yegorova) Instituta akusherstva i ginekologii AMN SSSR.

(STREPTOMYCIN) (PERINEUM--RUPTURE)
(SUTURES)

SOLNTSEVA, Ye.M.

Late results of applying secondary sutures in perineal wounds. Sov. med. 27 no.11:59-61 N '63 (MIRA 18:1)

1. Iz 2-go akusherskogo otdeleniya (zav. - prof. S.G. Khaskin) Instituta akusherstva i ginekologii (direktor - prof. M.A. Petrov-Maslakov) AMN SSSR, Leningrad.

SOINTSEVA, Ye.L.

Morulina ghilarovi sp. n. and the revision of the genus Morulina (Börner) (Collembola, Neanuridae). Zool. zhur. 43 no.7:994-999 '64.
(MIRA 17:12)

1. Chair of Zoology, V.I.Lenin State Pedagogical College of Moscow.

AYZENBERG, Yu.B., inzh.; SOLNTSEVA, Z.A., inzh.

Presently manufactured light fixtures with incandescent lamps and their principal characteristics. Svetotekhnika 9 no.9: 27-32 S '63. (MIRA 16:10)

1. Vsesoyuznyy svetotekhnicheskiy institut.

SOLNTSEVA, Z.A., inzh.

New light fixtures with DRL lamps and their principal characteristics. Svetotekhnika 9 no.11:32 N '63. (MIRA 16:12)

MAKEYENKO, M.M.; PROSKURIN, I.G.; LEYDERMAN, G.I.; SOLNTSEVA, Z.V.; NOVAK, V.A.; KARTELISHEV, V.T.; TSULIMOV, A., red.; POLEVAYA, Ye., tekhn.red.

[Moldavian Economic Administrative Region] Moldavskii ekonomicheskii administrativnyi raion. Kishinev, Gos.izd-vo "Kartia Moldoveniaske," 1961. 168 p. (MIRA 14:6)
(Moldavia—Economic conditions)

SOLNTSEVA-RYAZANOVA, M.S.; TOLCSKAYA, M.S. (Moskva)

Effect of experimental sulfonamide poisoning on the higher nervous activity and on cortical synapses. Pat.fiziol. i eksp.terap. 3 no.4: 21-25 Jl-Ag '59. (MIRA 12:12)

1. Iz kafedry farmakologii (zav. - prof. M.M. Nikolayeva) Moskovskogo farmatsevticheskogo instituta i patologoanatomicheskoy laboratorii (zav. - prof. P.P. Dvizhkov) Instituta gigiyeny truda i profzabolevaniy AMN SSSR.

(SULFONAMIDES toxicology)
(CEREBRAL CORTEX pharmacology)
(REFLEX, CONDITIONED pharmacology)

25(1) PHASE I BOOK EXPLOITATION CZECH/2526

Kvapil, Ladislav; Bedřich Solný, Engineer; and Vlastimil Kalášek, Engineer

Elektricke odporove pece (Electric Resistance Furnaces) Praha, Státní Nakledatelství Technicke Literatury, 1958. 235 p. (Series: Elektrotechnická minima, Sv. 26) 2,200 copies printed.

Reviewer: Zdeněk Ryska, Doctor, Engineer, Docent; Resp. Ed.: Ludvík Kačerovský; Tech. Ed.: Libuše Hokrová; Managing Ed. for Literature on Electrical Engineering: František Kašpar, Doctor, Engineer.

PURPOSE: The book is intended for workers, foremen, and economists concerned with electric furnaces. It should facilitate selection of the equipment adequate for any given plant.

COVERAGE: The book briefly explains electrotechnical and thermal fundamentals. The types of electric resistance furnaces mass-produced in Czechoslovakia are described. Construction, servicing, maintenance, and repair of mechanized furnaces for

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special purposes are described as are resistance furnaces with protective atmosphere and devices for producing the atmosphere. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

CZECH/2526

Electric Resistance Furnaces

AVAILABLE: Library of Congress (TK4661.K9)

GO/ec
11-20-59

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L 13288-66

ACC NR: AP6000321

installation for polymerizing gaseous olefins, e.g. in production of low pressure polyethylene. The unit consists of two temperature controllers connected to a flow regulator for the product reactor, and a pressure regulator connected to the controller for the coolant. For increased productivity and optimization of the process, one temperature controller is connected through a speed reducer to the pressure controller which is connected through a second speed reducer to the flow regulator for the product reactor. The other temperature controller is connected to the flow regulator for the coolant.

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L 13288-66

ACC NR: AP6000321

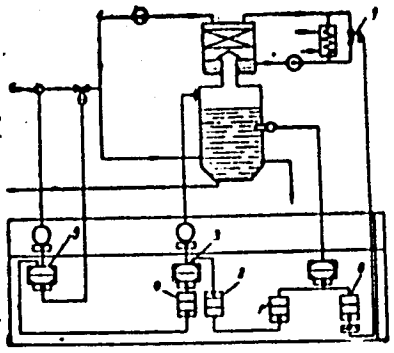

Fig. 1. 1 - first temperature controller; 2 - first speed reducer; 3 - pressure regulator; 4 - second speed reducer; 5 - flow regulator for the product; 6 - second temperature controller; 7 - flow regulator for the coolant.

SUB CODE: 07/ SUBM DATE: 01Feb65/

Card 3/3

SOLNYSHKIN, N.P.

USSR/Miscellaneous

Card 1/1 Pub. 103 - 18/23

Authors : Solnyshkin, N. P.

Title : Reduction of gear noise

Periodical : Stan. i instr. 2, page 37, Feb 1954

Abstract : The development and introduction into industry of a new method of reducing the noise of machine gears is announced. Drawings.

Institution : ....

Submitted : .....

SOLNYSHKIN, N.P., inzh.

Over-all mechanization in foundries. Bezop.truda v prom. 4 no.11:30-31 N '60. (MIRA 13:11)

1. Pskovskiy mashinostroitel'nyy zavod.
(Foundries--Equipment and supplies--Technological innovations)

SOLNYSHKIN, V. I.

"Investigating the Three Component System 'Water-Soap-Oil' (Theory of Consistency Greases)." Cand Chem Sci, Inst of General and Inorganic Chemistry, Acad Sci Ukrainian SSR, Kiev, 1954. (RZhKhim, No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

Solnyshkin, V. I.

3 M.A. YOUTZ
2 copies

Lyophilic properties of the sodium and calcium salts of saturated and unsaturated fatty acids. A. V. Dumanskii, V. I. Solnyshkin, and T. A. Demchenko (*Ukr. Khim. Zh.*, 1934, 20: 633–640). The oleophilic properties of the Na and Ca soaps of stearic, oleic, ricinoleic, myristic and nonoic acids were estimated by measurement of their heat of interaction with a hydrocarbon oil in an adiabatic calorimeter. The heat evolution (of the order of 1 g.-cal./g.) increases linearly with the no. of C-atoms in the soap mol., and indicates the formation of bonds between soap and hydrocarbon. The hydrophilic properties of Na oleate, ricinoleate and stearate were studied (*a*) by measurements of the heat of hydration in aq. solution, and (*b*) by measurements of the heat evolved during saturation of a xylene solution of the soap with water. The degrees of hydration of Na oleate and ricinoleate correspond with 2 and 3 mol. of water, respectively.

F. W. KIRKBRIDE.

Inst. Gen and Inorg. Chem, AS Ukr SSR

SOLNYSHKIN, V.I.

Mechanical properties of the system: water — soap — oil. Koll.zhur. 17 no.1:46-49 Ja-F '55. (MLRA 8:3)

1. Institut obshchey i neorganicheskoy khimii AN USSR, Laboratoriya kolloidnoy khimii.
(Colloids)

SOLNYSHKIN, V.I.

Heat capacity of aqueous solutions of some soaps [with summary in English]. Koll.zhur. 19 no.5:629-632 S-O '57. (MIRA 10:10)

1.Institut gornogo dela AN SSSR, Otdel obogashcheniya.
(Soap) (Heat capacity)

SOLNYSHKIN, V.I.

Hydrates of calcium salts of some fatty acids [with summary in English]. Koll. zhur. 19 no.6:736-740 N-D '57. (MIRA 11:1)

1. Institut gornogo dela AN SSSR, Moskva.
(Hydrates) (Calcium salts) (Acids, Fatty)

SOV/24-58-11-34/42

AUTHOR: Solnyshkin, V. I. (Moscow)

TITLE: On the Structure of Particles of Heavy Suspensions (O strukture chastits tyazhelykh suspenziy)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 11, pp 126-128 (USSR)

ABSTRACT: Physical and chemical study of weighting materials is necessary because the products of hydrolysis of their surfaces have colloidal properties and may become spontaneously distributed in the aqueous medium and form structured, finely dispersed suspensions if the ratios of the solid phase to the liquid phase are optimum values. Thickening of heavy suspensions brings about an increase in their viscosity which affects adversely the duration and speed of separation of the mineral grains. Ordinary suspensions do not possess such properties and their parameters comply with the laws of simple mixtures. Thus, the phenomenon of stability of such coarsely dispersed systems as are heavy industrial suspensions can be studied from the point of view of formation of colloid shells around grains of the weight increasing medium and subsequent spontaneous distribution of the forming finely dispersed

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On the Structure of Particles of Heavy Suspensions

phase in the aqueous medium. For obtaining some accurate information the author studied the hydrophilic properties and the speed of deposition of suspensions of ferrosilicon (90% Fe, 10% Si). The investigations were carried out using an adiabatic calorimeter and sedimentometric scales. The method of recording the adiabatic calorigraphs was applied for studying the particles of ferrosilicon which are used as weighting materials for heavy industrial suspensions. On the basis of the obtained calorigraphs of ferrosilicon in water, in aqueous solutions of gelatine and bichromate, the assumption is expressed that on the surface of the particles a hydrophilic shell of chalk silicagels exists which increases the stability of the grains of the weighting material and reduces the average limit speed of their settling. Preliminary treatment of the particles of the weighting materials with a solution of gelatine and bichromate stabilises the suspensions of ferrosilicon. The work described in this paper was carried out under the supervision of I. N. Plaksin and

SOV/24-58-11-34/42

On the Structure of Particles of Heavy Suspensions

with the a d v i c e of A. V. Dumanskiy.
There are three figures and 6 references, 3 of which are Soviet, 2 German, 1 French.

ASSOCIATION: Institut gornogo dela AN SSSR
(Mining Institute, Ac.Sc., USSR)

SUBMITTED: June 20, 1956

Card 3/3

SOV/180-59-3-41/43

AUTHOR: Solnyshkin, V.I. (Moscow)

TITLE: On the Flow of Micel Stream in Analogues of Greases

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 3, pp 190-191(USSR)

ABSTRACT: A study of the rheological properties of analogues of greases - solutions of sodium oleate in vaseline oil with various additions of water was carried out using a rotational viscosimeter (described in Ref 4). The curves representing the dependence of angular velocity of the rotation of the cylinder of the viscosimeter (ω) on the value of the falling weight P are shown in Fig 1. The changes in the limiting stress of slip of the system with the addition of water are interpreted by the fact that, on blocking of the hydrophilic group of soap molecules by water molecules, shear can take place at lower loads (Fig 2, curve 3). There are 2 figures and 8 references, 6 of which are Soviet, 1 English and 1 German.

ASSOCIATION: Institut gornogo dela AN SSSR (Institute of Mining,

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SOV/180-59-3-41/43

On the Flow of Micel Stream in Analogues of Greases

Academy of Sciences, USSR)

SUBMITTED: March 28, 1957

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5(3)

AUTHORS: Plaksin, I. N., Corresponding Member, Academy of Sciences, USSR, Solnyshkin, V. I.

SOV/20-124-1-43/69

TITLE: Infrared Spectra of Some Flotation Reagents (Infrakrasnyye spektry nekotorykh flotoreagentov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 153-154 (USSR)

ABSTRACT: It is difficult to draw a clear conclusion with respect to the character of formation of the monomolecular layer in the case of sorption of the reagents mentioned in the title on the surface of carbon particles. The greatest effect in carbon flotation is exerted by those reagents containing a hydroxyl group and an apolar part of the terpene -, aliphatic and aromatic type. For the purpose of clarifying the structural peculiarities of alcohol-like reagents the following were investigated by infrared spectroscopy:a. IM-68 (mixture of aliphatic alcohols with 6-8 carbon atoms per molecule)(Ref 4), b. Mixture of C_{13-18}-alcohols with a saturated and an unsaturated carbon chain and c. Retort residue (after the distillation of sulfate crude terpentine; the content of

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terpene alcohols is up to 47%),(Ref 4). The infraspectrograms taken by the 2-ray spectrophotometer IKS-2 within a range of 3 to 9μ have common absorption bands. They determine the composition of reagents with respect to the content of carbon groups connected with oxygen and hydrogen. The heating of carbon in vacuum up to 550° causes the loss of the bands 3300 and 2920 cm^{-1}, which are characteristic of the hydrogen bond and the CH_2 groups (Ref 8). In the first place this is evidence of the sublimation of the oxidized surface layer of the carbon particles. The occurrence of groups which are capable of forming hydrogen bonds on the surface of carbon as well as in the flotation reagent indicates a physical sorption of the surface active substance on the contact and the formation of a stable monomolecular layer. This is confirmed by strong bands at 3300 cm^{-1} which point to the existence of the hydrogen bond on the surface of the carbon particles as well as in the reagents. L. A. Ignat'yeva contributed to the work and to the discussion of the results.

Infrared Spectra of Some Flotation Reagents SOV/20-124-1-43/69

There are 1 figure and 8 references, 5 of which are Soviet.

ASSOCIATION: Institut gornogo dela Akademii nauk SSSR
(Institute of Mining Industry, Academy of Sciences, USSR)

SUBMITTED: September 6, 1958

Card 3/3

PLAKSIN, I.N.; SOLNYSHKIN, V.I., kand.khimicheskikh nauk

Study of some flotation reagents by infrared spectroscopy. Trudy Inst.gor.dela 6:21-29 '60. (MIRA 14:4)

1. Chlen-korrespondent AN SSSR (for Plaksin).
(Flotation—Equipment and supplies) (Spectrum, Infrared)

SOLNYSHKIN, V.I., kand.khimicheskikh nauk

Heat of wetting of coal by aqueous solutions of flotation reagents. Trudy Inst.gor.dela 6:117-128 '60. (MIRA 14:4)

(Coal preparation) (Heat of wetting)

PLAKSIN, I.N.; SOLNYSHKIN, V.I.

Effect of a caustic soda solution on beryl surfaces during preparation for flotation. Izv. vys. ucheb. zav.; tsvet. met. 4 no.3:28-36 '61. (MIRA 15:1)

1. Institut gornogo dela AN SSSR i Krasnoyarskiy institut tsvetnykh metallov.

(Beryl)
(Flotation)

PLAKSIN, I.N.; SOLNYSHKIN, V.I.

Effect of sodium hydroxide solution on the absorption band of surface hydroxyl groups of certain silicates. Dokl. AN SSSR 139 no.4:936-937 Ag '61. (MIRA 14:7)

1. Institut gornogo dela im. A.A. Skochinskogo AN SSSR. 2. Chlen-korrespondent AN SSSR (for Plaksin).
(Sodium hydroxide) (Hydroxyl group--Spectra)

SOLNYSHKIN, V.I., kand. khim. nauk

Device for determining the electrokinetic potential of coal grains. Nauch. soob. IGD 11:204-206 '61. (MIRA 16:4)

(Coal--Electric properties)

SOLNYSHKIN, V.I., kand.khim. nauk

Effect of oxygen on the surface on some nonsulfide minerals. Nauch. soob. IGD 16:71-82 '62. (MIRA 16:8)
(Oxidation) (Flotation)

SOLNYSHKIN, V.I., kand.khim.nauk

Effect of oxygen and flotation reagents on the structure of coal middlings in suspensions. Nauch. soob. IGD 17:159-163 '62. (MIRA 16:7)

(Coal--Analysis)

PLAKSIN, I.N.; SOLNYSHKIN, V.I.

Light absorption by nonsulfide minerals in the 10-micron infrared region. Dokl.AN SSSR 144 no.1:186-188 My '62. (MIRA 15:5)

1. Institut gornogo dela im. A.A.Skochinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR (for Plaksin).
(Minerals—Spectra)

TUTURINA, V.V.; SLAVNIN, G.P.; SOLNYSHKIN, V.I., otv. red.; GADZHINSKAYA, M.A., red.izd-va; BOLDYREVA, Z.A., tekhn. red.

[Organic chemistry and flotation agents]Organicheskaia khimiia i flotoreagenty. Moskva, Gosgortekhizdat, 1962. 187 p. (MIRA 16:3)

(Flotation) (Chemistry, Organic))

SOLNYSHKIN, V.I., kand.khim. nauk

Effect of an alkaline solution on the 3-micron absorption in the infrared spectrum of some minerals. Nauch. soob. IGD 19:47-53 '63. (MIRA 17:2)

SOLNYSHKIN, V.I., kand. khim. nauk; TOMOV, T.G., inzh.

Electron microscope study of particles in aqueous suspensions of ferrosilicon and separation of tin-bearing ores in them. Nauch. soob. IGD 20:145-148 '63. (MIRA 16:10)

(Electron microscopy)
(Ore dressing--Equipment and supplies)

KUZ'KIN, S.F.; SOLNYSHKIN, V.I.; CHZHEN YU-LUN [Cheng Yu-lung]

Investigating by methods of radiometry and infrared spectroscopy the mechanism of the interaction of the AMP cation collector with apatite and calcite. Izv. vys. ucheb. zav.; tsvet. met. 6 no.3: 35-39 '63. (MIRA 16:9)

1. Moskovskiy institut stali i splavov, kafedra obogashcheniya poleznykh iskopayemykh.
(Flotation—Equipment and supplies) (Radiometry)
(Spectrum, Infrared)

PLAKSIN, I.N.; SOLNYSHKIN, V.I.; CHAPLYGINA, Ye.M.

Effect of oxygen on oleic acid. Dokl. AN SSSR 153 no.6: 1350-1352 D '63. (MIRA 17:1)

1. Institut gornogo dela im. A.A. Skochinskogo. 2. Chlen-korrespondent AN SSSR (for Plaksin).

[illegible], V. ..., PAKOVNIKOV, N.A.

Interaction of the oxy forms of chlorine with the surfaces of some minerals. Dokl. AN SSSR 150 no. [illegible] My '63. (MIRA 17:7)

1. Institut gornogo dela imeni A.A.Skochinskogo. Predstavleno akademikom P.A.Rebinderom.

KOSTINA, L. V. NAZAROVA, G.N., PLAKSIN, I.N., SOLNTSEVA, N. V.

Chemical mechanism of the controlling action of sodium hexafluorosilicate on the flotation of some minerals. Dokl. AN SSSR 161 no.6: 1382-1384 Ap '65. (MIRA 18:5)

1. Institut gornogo dela im. A.A. Skochinskogo. 2. Chlen-korrespondent AN SSSR (for Plaksin).

PLAKSIN, I.N.; [illegible]; SHRADER, E.A.

Reaction of struverite and accompanying minerals with oleic acid. Dokl. AN SSSR 162 no.4:879-882 Je '65. (MIRA 18:5)

1. Institut gornogo dela im. A.A.Skochinskogo. 2. Chlen-korrespondent AN SSSR.

SOLNYSHKO, A.L., assistant

Course of pregnancy, labor and postpartum period in multiple sclerosis. Akush. i gin. no.6:73-74 N-D '63. (MIRA 17:12)

1. Iz 2-y akusherska-ginekologicheskoy kafedry (zav. - dotsent Z.M. Dzhamalova) Tashkentskogo instituta usovershenstvovaniya vrachey.

SOLNYSHKOV, A. I.

S/120/62/000/004/006/047
E039/E420

AUTHORS: Malyshev, I.F., Popkovich, A.V., Roshal', G.Ya., Zheleznikov, F.G., Lysov, A.V., Tsepakin, S.G., Solnyshkov, A.I., Bovtsov, A.S., Astakhov, Ye.Ya., Mironov, B.V., Lapitskiy, Yu.Ya., Batalin, V.A., Khoroshkov, V.S.

TITLE: The electrostatic accelerator - Injector of the proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 37-45

TEXT: An electrostatic accelerator used as an injector in the 7.0 Gev proton synchrotron developed in 1956 by NIIEFA is described. The pressure chamber is 2200 mm in diameter and 7400 mm high and is intended for working pressures of up to 16 atm. Insulating gas is N_2:CO_2 mixture with a ratio of partial pressure of 3:1. The main column is of conventional segmented construction using polymethylmetacrylate. Values of the dependence of the voltage produced on the gas pressure shows that 4 MV is obtained at 6.5 atm and 5.7 MV at 16 atm and a relative humidity of $< 1\%$. The charge transporter belt is a six layer

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The electrostatic accelerator ...

fabric driven by a 3000 rpm 10 KW motor at 20 m/sec. The accelerating tube and its electrode system is described in detail: it is 300 mm inner diameter with 44 segments and the residual pressure is 2 to 5 x 10^{-6} mm Hg. A Penning type discharge is used in the ion source which provides 0.3 mA total ion current on continuous operation or 20 mA pulsed; the proton component being 10 to 12% and 65% respectively. The energy of the injected particles is stabilized to about 0.1%. Results of operation in 1960-61 show that beam currents of 4 to 5 mA are obtained at 4 MV. There are 10 figures and 1 table.

ASSOCIATIONS: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)
Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 6, 1962

SOLNYSHKOV, A. I.

S/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo instituta (Scientific Conference of the Moscow Engineering Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fiveyskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionization losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadze, h-f conductivity of subcritical plasma;

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Nauchnaya konferentsiya... S/089/62/013/006/019/027
B102/B186

design of 30-Mev electron linear accelerator; Ye. G. Pyatnov, A. A. Glaskov, V. G. Lopato, A. I. Finogenov, G. M. Skepskiy, V. D. Seleznev, experimental characteristics of low-energy electron linear accelerators; G. A. Zeytlenk, V. M. Levin, S. I. Piskunov, V. L. Smirnov, V. K. Khokhlov, radiocircuit parameters of ЛУЭ (LUE)-type accelerators; G. A. Tyagunov, O. A. Val'dner, B. M. Gokhberg, S. I. Koreshunov, V. I. Kotov, Ye. M. Moroz, accelerator classification and terminology; O. S. Milovanov, V. B. Varaksin, P. R. Zenkevich, theoretical analysis of magnetron operation; A. G. Tragov, P. R. Zenkevich, calculation of attenuation in a diaphragmated waveguide; Yu. P. Lazarenko, A. V. Ryabtsev, optimum attenuation length for linear accelerator; A. A. Zhigarev, R. Ye. Yeliseyev, review on trajectographs; I. G. Morozova, G. A. Tyagunov, review on more than 500 ion sources; M. A. Abroyan, V. L. Komarov, duoplasmatron-type source; V. S. Kuznetsov, A. I. Solnyshkov, calculation and production of intense ion beams; V. M. Rybin (Ye. V. Armenskiy), inductive current transmitters of high sensitivity; V. I. Korona, G. A. Tyagunov, kinetic description of linear acceleration of relativistic electrons; A. D. Vlasov, phase oscillations in linear accelerators; E. L. Burshteyn, G. V. Voskresenskiy, beam field effects in the waveguide of an electron linear accelerator; R. S. Bobovikov,

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SOLNYSHKOV, A. I. ; KOMAROV, V. P.; KUZNETSOV, V. S.; ABROYAN, M. A.; IVANOV, N. F. ZHELEZNIKOV, F. G.; ROYFE, I. M.; ZABLOTSKAYA, G. R.; IVLEV, I. V. ; LATMANISOVA, G. M. and GERASIMOV, V. P.

Current Injector for a Strong Focussed Linac.

report presented at the Intl. Conf. on High Energy Accelerators, Dubna, August 1963.

IVANOV, N.F.; KUZNETSOV, V.S.; SOLNYSHKOV, A.I.

Formation of pulse ion beams carrying current of the order of hundreds of milliamperes in direct-acting accelerators. Elektrofiz. app. no.2:169-178 '64. (MIRA 18:3)

L 59241-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pt-7 IJP(c) GS
ACCESSION NR: AT5007937 S/0000/64/000/000/0507/0512

AUTHOR: Abroyan, M. A.; Gerasimov, V. P.; Zheleznikov, F. G.; Zablotskaya, G. R.; Ivanov, N. F.; Ivlev, A. V.; Komarov, V. L.; Kuznetsov, V. S.; Latmanizova, G. M.; Royfe, I. M.; Solnyshkov, A. I.

TITLE: High-current injector of a linear accelerator with strong focusing

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 507-512

TOPIC TAGS: linear accelerator, strong focusing accelerator, electron optics

ABSTRACT: Conditions governing injection in linear proton accelerators determined the requirements on the ion beam, which were of the following order: energy, 700 kev; beam current, 400 milliamperes; beam diameter, 10 millimeters; pulse duration, 10-15 microseconds; energy stability; 0.5%; angular divergence, $\pm 5 \cdot 10^{-3}$ radian. The principal difficulties occur in the development of a system for producing and forming an ion beam with a large current from a powerful stabilized high-voltage source. For particle energy of 700 kev, a variation of the open machine is chosen which ensures good operational characteristics. In the case of large currents, the effect of the beam's spatial charge is substantial and must be taken into account. It

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L 59241-65
ACCESSION NR: AT5007937

considerably complicates the design of the ion-optical system. Experimental testing of the selected version of the optical system for a proton beam with a current of the order of 0.5 ampere confirmed the correctness of the theoretical conclusions and indicated the possibility of producing a proton injector with the above parameters. The author discusses the following topics: design of a system for forming the beam; the experimental setup (injector power supply, high-voltage stabilized power supply circuit, ion source, and current characteristics); the results of the measurements (e.g. current density distribution over tube cross-section). "In conclusion, the author thanks I. F. Malyshev for his constant interest and cooperation during the work, and also R. P. Zaytseva for doing the computer calculations." Orig. art. has: 8 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific-Research Institute of Electrophysical Equipment, GKAE SSSR)

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